

CLIMATOLOGICAL DATA FOR JULY, 1913.

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

July, 1913, was a month of nearly normal temperature; but warmer than July of the preceding year and not quite as warm as July, 1911, or July, 1910. In the matter of precipitation July, 1913, breaks all records for amount of precipitation in a midsummer month. The rain was heavy, although not of long duration. The average for the State as a whole was 0.46 of an inch, which is a departure of more than 0.40 of an inch above the normal.

On July 22d there was heavy rain in the central and northern counties. There were frequent thunderstorms throughout the month in the Sierra and tourists and campers experienced much unpleasant weather where usually extremely dry conditions prevail.

The water supply was somewhat augmented by the unusual rain; but the effect was only temporary and complaints of scarcity of water were common at the end of the month.

From an agricultural point of view weather conditions were fair. There was some slight damage to drying apricots and peaches but no injury to crops in general. Fortunately there were no prolonged periods of desiccating north winds. There was the normal amount of sunshine and less fog than usual on the coast.

TEMPERATURE.

The mean temperature for the State was nearly 1° below the normal. The following table gives the means and departures for each July from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
1897.....	74.5	+0.5	1906.....	76.8	+2.8
1898.....	81.4	+7.4	1907.....	73.1	-0.9
1899.....	77.9	+3.9	1908.....	76.4	+2.4
1900.....	75.9	+1.9	1909.....	71.2	-2.8
1901.....	76.0	+2.0	1910.....	75.5	+1.5
1902.....	72.8	-1.2	1911.....	74.1	+0.1
1903.....	71.2	-2.8	1912.....	71.0	-3.0
1904.....	72.2	-1.8	1913.....	73.1	-0.9
1905.....	74.8	+0.8			

The highest temperature recorded at any station was 119° at Heber on the 10th. The lowest temperature was 27° at Deer Creek on the 14th, which is 4° higher than the lowest recorded during the same month last year.

On July 11th unusually warm weather prevailed in the central counties of California. Maximum temperatures exceeding 110° were reported at many points. At St. Helena, Healdsburg, and other points in this section, the temperature reached 115°.

PRECIPITATION.

The rainfall was unusually heavy. All rainfall records for July were broken during the 48 hours of July 22-23, and there were constant showers in the mountains from

the 22d to the 29th. The greatest monthly amount was 4.40 at Madeline and the greatest 24-hour amount was 2.15 inches at Macdoel. There was no rainfall at 31 stations.

The following table gives the average precipitation and departure from the normal for each July from 1897 to 1912, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	<i>Inches.</i>	<i>Inches.</i>		<i>Inches.</i>	<i>Inches.</i>
1897.....	0.01	-0.03	1906.....	0.04	0.00
1898.....	T.	-0.04	1907.....	.03	-0.01
1899.....	T.	-0.04	1908.....	.04	.00
1900.....	.03	-0.01	1909.....	.05	+0.01
1901.....	.01	-0.03	1910.....	.10	+0.06
1902.....	.07	+0.03	1911.....	.10	+0.06
1903.....	.03	-0.01	1912.....	.06	+0.02
1904.....	.09	+0.05	1913.....	.46	+0.42
1905.....	.01	-0.03			

SUNSHINE.

The following table gives the hours of sunshine and percentages of the possible:

Stations.	Hours.	Percentage of possible.	Stations.	Hours.	Percentage of possible.
Eureka.....	215	47	Sacramento.....	409	89
Fresno.....	405	90	San Diego.....	320	73
Los Angeles.....	307	70	San Francisco.....	301	67
Mount Tamalpais.....	407	91	San Jose.....	371	83
Red Bluff.....	372	82	San Luis Obispo.....	327	74

NOTE ON THE WEATHER AT POINT REYES.

By Mr. JAMES JONES, Observer.

During the past 22 years precipitation to the amount of 0.01 inch or more, for the month of July, has occurred only six times. Therefore the 24-hour rainfall of 0.13 on July 22-23 this year is to be considered rather remarkable. Hay crops in this vicinity had just been cut and not yet stacked when this unseasonable rain came on, but only slight damage resulted.

The monthly mean temperature was, with the exception of that for July, 1896, the highest July mean ever recorded. This high average was caused by slightly higher daily averages throughout the month, as there were no periods of exceptionally warm weather.

There were 21 days with dense fog, but this is not unusual at this station.

The first half of the month was somewhat windy, but after the 15th there was comparatively little wind, not one gale of 40 miles or over being recorded after that date.

Light haze was observed six times during the month. On July 12 there was a light haze all afternoon. The sunset was followed by a reddish-yellow glow and wisps of smoke, visible just above the haze.

TABLE 1.—Climatological data for July, 1913. District No. 11, California.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.			Number of overcast cloudy days.
<b>Oregon.</b>																				
Klamath Falls	Klamath	4,100	24	64.2	- 3.9	90	8†	36	2†	40	1.37	+ 1.17	0.99	0	4	17	10	4	nw.	Augusta J. Hayden. C. C. Gott. U. S. Reclamation Service. Ward Rueck.
Lake View	Lake	4,825	30	61.6	- 5.0	86	8†	32	13	43	2.69	+ 2.43	1.14	0	5	17	7	7	s.	
Merrill	Klamath	4,070	8	64.2†	.....	96†	20	33	13	42	2.02	.....	1.62	0	6	22	0	9	.....	
Yonna	do	4,146	6	61.1	.....	98	19	30	3	63	1.66	.....	0.89	0	4	15	6	10	w.	
<b>California.</b>																				
Alturas	Modoc	4,400	9	65.8	.....	94	5†	34	14	52	3.00	.....	2.00	0	8	19	7	5	w.	Prof. C. B. Towle. Santa Fe Co. Southern Pacific Co.
Angiola	Tulare	208	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Antioch**	Contra Costa	46	34	76.7	+ 0.9	101	6	50	23	.....	0.18	+ 0.18	0.12	0	2	29	0	2	.....	
Aptos**	Santa Cruz	102	28	65.5	+ 3.2	80	10	52	17	.....	0.48	+ 0.47	0.43	0	2	23	4	4	nw.	
Arrowhead Springs	San Bernardino	2,000	4	74.4	.....	101	5†	51	26	35	0.15	.....	0.10	0	2	26	4	1	.....	
Auburn	Placer	1,360	42	73.8	- 3.0	98	8†	54	4	36	0.04	+ 0.03	0.04	0	1	28	2	1	ne.	
Avalon	Los Angeles	30	3	65.9	.....	74	7†	57	2†	15	T.	.....	T.	0	0	27	1	3	w.	
Azusa	do	540	11	73.9	+ 0.5	102	7	53	1	45	0.01	+ 0.01	0.01	0	1	28	2	1	.....	
Bagdad	San Bernardino	784	10	92.3	- 4.0	116	11†	60	24	39	0.00	- 0.26	0.00	0	0	31	0	0	.....	
Bakersfield	Kern	404	24	79.7	- 5.6	116	6	49	4	62	0.43	+ 0.42	0.33	0	2	27	0	4	.....	
Barstow	San Bernardino	2,105	10	84.2	+ 0.8	110	11	58	29†	38	0.35	+ 0.23	0.20	0	2	24	5	2	w.	
Berkeley	Alameda	317	26	63.6	+ 2.3	95	11	49	14	34	0.19	+ 0.17	0.10	0	2	14	7	10	sw.	
Betteravia	Santa Barbara	.....	.....	67.2	.....	92	10	46	1	40	0.00	.....	0.00	0	0	21	10	0	w.	
Biggs**	Butte	98	14	77.9	- 1.5	103	6†	55	3	.....	0.20	+ 0.20	0.20	0	1	22	2	7	s.	
Bishop	Inyo	4,450	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bishop Creek	do	8,500	3	58.2	.....	80	7†	39	24†	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Blocksburg	Humboldt	1,700	7	66.7	.....	95	17	40	7	48	0.41	.....	0.27	0	2	19	5	7	nw.	
Blue Canon	Placer	4,695	14	63.4	- 1.8	88	8†	42	4†	40	0.52	+ 0.52	0.40	0	2	24	2	5	.....	
Blythe	Riverside	268	4	85.3	.....	116	11	57	28	51	2.20	.....	1.15	0	3	18	5	8	s.	
Branscomb	Mendocino	2,000	13	64.6	- 2.1	98	11	39	2†	45	0.40	+ 0.28	0.40	0	1	22	5	4	n.	
Brawley	Imperial	105	4	86.7	.....	113	11	63	25	40	0.27	.....	0.27	0	1	.....	.....	.....	.....	
Burney	Shasta	3,300	3	63.4	.....	89	10†	34	14†	36	0.75	.....	0.37	0	4	16	9	6	w.	
Cahuilla	Riverside	3,600	2	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.44	0	2	.....	.....	.....	.....	
Calcedo	Imperial	0	8	87.0	.....	115	9	64	24†	45	0.11	.....	0.06	0	2	21	7	3	se.	
Callente**	Kern	1,200	37	81.3	- 3.5	109	5†	65	22†	.....	1.00	+ 1.00	1.00	0	1	23	3	6	w.	
Callotoga**	Napa	363	41	73.1	+ 0.5	114	11	50	24†	.....	T.	- 0.03	T.	0	0	26	0	5	w.	
Campbell	Santa Clara	217	16	66.6	+ 1.7	103	11	41	15	50	0.09	+ 0.09	0.08	0	2	25	4	2	nw.	
Camptonville (near)	Yuba	3,500	6	72.2	.....	102	11	50	14	40	0.33	.....	0.25	0	3	20	4	7	s.	
Cedarville	Modoc	4,675	19	68.0	- 1.6	94	5	40	1†	38	1.44	+ 1.18	0.70	0	5	5	20	6	sw.	
Chico	Butte	189	43	79.2	- 4.7	109	12	52	15†	48	0.09	+ 0.06	0.09	0	1	23	2	6	s.	
China Flat	Humboldt	600	4	74.6	.....	104	18†	46	2†	48	0.61	.....	0.24	0	4	19	7	5	w.	
Chino	San Bernardino	714	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cisno**	Placer	5,639	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Claremont	Los Angeles	1,200	21	73.1	+ 0.2	103	7	49	30	40	0.04	+ 0.02	0.04	0	1	22	7	2	.....	
Cloverdale	Sonoma	340	11	72.6	+ 0.8	110	11	46	8	53	0.39	+ 0.39	0.39	0	1	27	1	3	w.	
Coalinga	Fresno	663	1	81.1	.....	110	7	58	1†	42	1.22	.....	1.12	0	2	26	0	5	w.	
Colfax	Placer	2,421	42	73.1	- 2.2	102	12	45	3	38	0.00	- 0.02	0.00	0	0	27	0	4	.....	
Colusa	Colusa	60	10	77.0	- 0.1	104	11	53	15	38	T.	- 0.02	T.	0	0	25	2	4	.....	
Corning**	Tehama	277	27	88.0	+ 4.6	104	11	67	25	.....	T.	0.00	T.	0	0	18	13	0	s.	
Cuyamaca	San Diego	4,677	14	66.6	- 0.6	92	11	42	28†	41	0.52	+ 0.25	0.45	0	3	26	2	3	e.	
Davisville	Yolo	51	41	75.1	- 2.8	108	11	44	15	54	0.00	- 0.02	0.00	0	0	23	7	1	sw.	
Deer Creek	Nevada	3,700	6	63.8	.....	107	11	27	14	68	0.93	.....	0.35	0	4	19	9	3	n.	
Del Monte	Monterey	25	2	60.0	.....	84	10	50	7†	30	0.00	.....	0.00	0	0	25	4	2	n.	
Delta	Shasta	1,138	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Denair	Stanislaus	126	13	76.2	- 1.0	103	5†	51	15	41	0.00	0.00	0.00	0	0	30	0	1	.....	
De Saba	Butte	2,500	9	70.6	.....	98	11	44	16	43	0.20	.....	0.20	0	1	15	15	1	sw.	
Dobbins (near)	Yuba	1,650	9	77.8	.....	112	11	56	15†	40	0.18	.....	0.18	0	1	17	10	4	s.	
Downsville	Sierra	3,150	2	67.8	.....	100	11	38	15	53	1.41	.....	0.61	0	6	17	2	12	s.	
Dudley	Kings	595	1	86.6	.....	110	5†	58	28	45	0.28	.....	0.20	0	2	25	3	3	sw.	
Dudleys	Mariposa	3,000	4	66.8	.....	96	11	37	15	50	0.09	.....	0.06	0	2	17	11	3	nw.	
Dunlap (near)	Fresno	2,800	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Dunnigan**	Yolo	65	36	89.0	+ 7.2	108	11	65	36	.....	0.12	+ 0.12	0.12	0	1	27	1	3	s.	
Dunsmuir**	Siskiyou	2,285	24	71.4	+ 0.2	99	30†	55	2†	.....	0.96	+ 0.80	0.54	0	4	22	0	9	n.	
Durham	Butte	160	13	79.7	+ 1.2	106	12	51	15	44	0.08	+ 0.08	0.08	0	1	22	6	3	s.	
El Cajon	San Diego	432	14	71.6	- 1.0	96	5	52	1†	40	0.20	+ 0.10	0.20	0	1	31	0	0	sw.	
Electra	Amador	725	9	78.6	.....	109	11	57	15	40	0.00	.....	0.00	0	0	24	2	5	.....	
Emigrant Gap	Placer	5,230	39	65.2	- 2.3	91	12	31	28	49	T.	- 0.03	T.	0	0	25	0	6	.....	
Esccondido	San Diego	657	19	72.6	+ 0.3	101	10	48	25	43	0.07	+ 0.06	0.07	0	1	9	22	0	w.	
Eureka	Humboldt	64	27	57.2	+ 1.9	89	9	49	19	17	0.28	+ 0.19	0.14	0	9	6	17	8	n.	
Farmington**	San Joaquin	111	34	80.9	+ 2.7	108	11	60	24	.....	0.15	+ 0.15	0.15	0	1	22	8	1	nw.	
Folsom	Sacramento	262	41	81.1	+ 1.2	109	11	60	28†	41	T.	- 0.01	T.	0	0	20	0	11	s.	
Fordeys Dam	Nevada	6,500	18	64.2	.....	91	11	29	2†	42	3.69	+ 3.51	0.90	0	9	17	7	7	sw.	
Fort Bidwell	Modoc	4,375	24	64.6	.....	92†	18	38	13†	46	1.52	+ 1.20	0.75	0	5	17	4	10	.....	
Fruits Springs	Colusa	1,650	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fresno	Fresno	283	26	80.9	- 1.1	109	12	55	15	38	0.93	+ 0.33	0.33	0	1	24	5	2	nw.	
Galt**	Sacramento	49	35	73.2	- 5.8	105	12	57	28†											

TABLE 1.—Climatological data for July, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.			Number of partly cloudy days.	Number of overcast days.
Independence	Inyo	3,907	17	75.4	- 3.1	103	10	51	25	41	1.56	+ 1.45	1.33	0	6	15	10	6	.....	U. S. Weather Bureau
Indian Wells	Kern	2,500	35	89.4	- 5.1	117	11	65	30	40	0.28	+ 0.26	0.26	0	1	18	12	1	se.	I. D. McCoy.
Indio	Riverside	4,975	36	84.8	.....	104	11	50	3	22	0.70	.....	0.31	4	15	8	10	.....	F. N. Johnson.	
Inskip	Butte	287	35	52.6	+ 4.0	108	5	63	15	48	0.00	0.00	0.00	0	0	25	0	.....	Cal. Gas & Elect.	
Ione **	Amador	1,471	10	75.1	- 0.2	105	15	45	15	48	0.00	0.00	0.00	0	0	25	0	.....	Southern Pacific Co.	
Jamestown	Tuolumne	730	10	75.1	.....	105	15	45	15	48	0.00	0.00	0.00	0	0	25	0	.....	Serra Railway Co.	
Kennett	Shasta	85	1	78.8	.....	106	12	53	16	48	0.62	.....	0.44	0	2	16	14	0	ne.	Miss M. E. Parsons.
Kentfield	Marin	333	26	70.6	.....	112	11	47	14	53	0.19	+ 0.18	0.10	0	0	26	3	0	n.	Southern Pacific Co.
King City	Monterey	4,700	26	73.7	+ 6.2	113	13	43	16	58	0.00	0.00	0.00	0	0	26	0	.....	O. J. Todd.	
Lake Eleanor	Tuolumne	5,000	19	65.6	- 0.8	96	10	45	15	45	0.52	.....	0.23	4	4	18	6	4	s.	Southern Pacific Co.
La Porte	Plumas	255	13	78.2	- 2.1	110	12	6	45	45	1.57	+ 1.43	0.99	0	6	19	0	.....	C. W. Hendel.	
La Grand	Merced	600	15	82.9	+ 1.3	112	6	56	3	45	0.22	+ 0.25	0.20	2	2	26	0	.....	Santa Fe Co.	
Lemon Cove	Tulare	4,209	24	67.0	+ 2.1	117	11	47	26	24	0.06	+ 0.21	0.22	0	1	18	7	0	w.	W. R. Park.
Lick Observatory	Santa Clara	488	42	71.8	+ 1.7	110	11	48	14	53	0.27	+ 0.06	0.05	2	2	25	2	.....	The Director.	
Livermore	Alameda	2,728	8	74.2	.....	105	11	47	30	46	0.52	+ 0.26	0.20	0	3	27	3	.....	E. G. Still.	
Lone Pine	Inyo	4,400	4	70.5	+ 3.1	89	10	58	26	26	T.	.....	T.	0	13	15	0	.....	G. F. Marsh.	
Long Valley	Lassen	293	36	78.0	+ 2.0	105	11	57	25	25	0.17	- 0.02	0.17	0	0	22	0	.....	A. G. Evans.	
Los Angeles	Los Angeles	121	26	69.3	+ 1.5	107	11	46	21	48	0.17	+ 0.16	0.17	0	0	22	0	.....	U. S. Weather Bureau.	
Los Banos **	Merced	600	26	69.3	+ 1.5	107	11	46	21	48	0.17	+ 0.16	0.17	0	0	22	0	.....	Southern Pacific Co.	
Los Gatos	Santa Clara	3,410	3	64.2	.....	93	31	34	15	47	0.97	.....	0.36	0	0	23	4	.....	F. H. McCullagh.	
McCloud	Siskiyou	4,528	3	62.0	.....	88	18	33	15	47	3.15	.....	2.15	0	0	24	2	.....	R. F. Spencer.	
Macdonald	do	5,270	3	59.0	.....	88	18	31	41	50	4.48	.....	1.70	0	0	24	2	.....	Butte Valley Land Co.	
Madeline	Lassen	2,327	4	72.2	.....	103	11	45	14	45	0.17	.....	0.00	0	0	27	3	.....	J. H. Williams.	
Magalia	Butte	640	35	82.4	- 6.1	118	10	65	28	37	0.00	- 0.06	0.00	0	0	27	0	.....	Butte Co. R. R. Co.	
Mammoth Tank	Imperial	67	42	78.1	- 1.9	117	12	62	15	47	0.18	.....	0.16	0	2	20	4	.....	Southern Pacific Co.	
Maricopa	Kern	185	7	88.8	.....	114	9	52	25	36	T.	.....	T.	0	0	24	0	.....	Union Oil Co.	
Marysville	Yuba	64	35	72.9	+ 5.2	98	11	62	16	6	.....	.....	T.	0	0	21	9	.....	Southern Pacific Co.	
Mecca	Riverside	173	39	78.2	+ 3.5	107	12	53	16	49	0.28	+ 0.01	0.20	0	0	24	2	.....	E. A. Palmer.	
Menlo Park **	San Mateo	803	2	83.6	.....	109	12	53	14	43	0.24	+ 0.23	0.20	0	2	24	2	.....	Southern Pacific Co.	
Merced	Merced	2,600	2	68.0	.....	94	11	43	15	44	0.04	.....	0.21	0	2	19	6	.....	Santa Fe Co.	
Middlewater	Kern	660	22	78.6	+ 0.7	110	11	53	18	42	0.04	.....	0.04	0	2	19	6	.....	Union Oil Co.	
Mill Creek No. 1	Amador	90	41	76.2	- 5.3	105	9	60	25	21	0.06	.....	0.00	0	1	25	5	.....	Cal. Gas & Elect.	
Milton (near)	Calaveras	2,751	36	80.9	- 4.8	112	11	51	28	37	1.75	+ 1.69	1.75	0	0	23	4	.....	J. H. Southwick.	
Modesto **	Stanislaus	1,550	20	76.3	- 0.5	105	11	62	28	37	T.	.....	T.	0	0	24	4	.....	Southern Pacific Co.	
Mojave	Kern	3,210	7	67.8	.....	97	9	40	30	44	T.	.....	T.	0	0	24	4	.....	Do.	
Mokelumne Hill	Calaveras	2,450	25	67.0	+ 10.2	102	20	41	16	60	3.57	+ 3.34	2.07	0	3	7	12	.....	C. E. Prindle.	
Mono Ranch	Ventura	15	45	67.7	+ 6.7	90	11	56	31	31	0.00	0.00	0.00	0	0	26	5	.....	Herbert Lathrop.	
Montague	Siskiyou	4,500	14	67.2	- 3.3	96	11	49	28	23	0.09	+ 0.05	0.00	0	2	24	5	.....	I. E. De Boy.	
Monterey **	Kern	2,875	14	66.2	+ 0.2	98	11	39	11	45	0.00	.....	0.00	0	0	20	0	.....	Southern Pacific Co.	
Monterey	Marin	20	36	71.0	+ 3.4	106	11	52	14	42	0.01	.....	0.01	0	1	20	6	.....	John C. Knecht.	
Monterey	do	477	21	91.8	- 2.8	114	11	73	28	31	0.56	+ 0.29	0.40	0	2	23	3	.....	U. S. Weather Bureau.	
Mount Tamalpais	San Bernardino	5,350	4	67.6	.....	90	11	39	24	30	0.45	.....	0.24	0	1	19	10	.....	Alex. Hull.	
Napa City	Napa	2,850	21	68.4	- 0.4	102	11	40	15	49	0.24	+ 0.22	0.21	0	1	19	10	.....	A. R. Edgar.	
Napa (S. H.)	do	1,200	36	90.6	+ 14.0	111	6	68	28	49	0.45	+ 0.01	0.01	0	0	26	3	.....	Santa Fe Co.	
Needles	San Bernardino	91	24	78.9	- 3.1	112	5	41	14	58	0.18	+ 0.18	0.18	0	1	19	3	.....	T. O. Bailey.	
Nellis	San Diego	3,214	16	74.8	+ 3.3	104	11	54	15	31	0.40	+ 0.33	0.40	0	0	19	3	.....	S. W. Marsh.	
Nevada City	Nevada	3,000	9	72.6	.....	103	13	49	10	49	0.69	.....	0.50	0	3	21	8	.....	Southern Pacific Co.	
Newhall **	Los Angeles	156	19	79.5	+ 1.2	108	6	63	31	31	0.02	+ 0.02	0.02	0	1	25	0	.....	E. S. Wangenheim.	
Newman	Stanislaus	2,751	3	65.4	+ 3.6	95	11	52	14	31	0.12	+ 0.10	0.08	0	3	16	9	.....	J. R. McIntosh.	
North Bloomfield	Nevada	36	37	69.8	.....	78	5	50	30	20	0.05	.....	0.05	0	1	19	9	.....	U. S. Forest Service.	
North Fork	Madera	30	3	71.5	.....	102	10	45	30	47	0.08	+ 0.08	0.05	0	0	23	6	.....	Southern Pacific Co.	
Oakdale **	Stanislaus	300	7	81.4	- 5.0	109	12	56	14	48	0.04	+ 0.03	0.04	0	1	21	8	.....	Chabot Observatory.	
Oak Grove	San Diego	254	31	81.4	- 5.0	109	12	56	14	48	0.04	+ 0.03	0.04	0	1	21	8	.....	H. D. Brodie.	
Oakland	Alameda	520	10	76.8	- 2.8	107	18	52	15	45	0.92	+ 0.74	0.52	0	3	23	0	.....	W. H. Duncan.	
Oceanside	San Diego	250	29	79.4	- 0.8	107	9	51	18	49	0.05	+ 0.03	0.03	0	2	22	2	.....	U. S. Reclamation Service.	
Ojai Valley	Ventura	213	22	75.4	- 2.8	110	28	32	0	50	0.08	+ 0.05	0.04	0	2	23	6	.....	F. T. Hala.	
Oriand	Glenn	584	24	88.5	- 6.0	114	8	60	26	.....	.....	.....	0.00	0	0	24	5	.....	E. D. Fairchild.	
Orleans	Humboldt	827	23	69.6	- 1.8	97	7	46	30	38	0.01	+ 0.01	0.01	0	1	24	5	.....	Western Pacific Co.	
Oroville (near)	Butte	800	26	70.8	- 1.3	110	12	38	16	67	0.00	.....	0.00	0	0	21	8	.....	Southern Pacific Co.	
Palermo	do	190	17	66.8	+ 1.2	111	11	41	15	53	0.01	.....	0.01	0	1	20	10	.....	E. D. Sorver.	
Palm Springs **	Riverside	156	19	79.5	+ 1.2	108	6	63	31	31	0.02	+ 0.02	0.02	0	1	25	0	.....	Dr. F. W. Sawyer.	
Pasadena	Los Angeles	1,875	24	71.6	- 1.0	100	11	46	15	44	0.15	+ 0.13	0.15	0	1	23	0	.....	E. H. Farnell.	
Paso Robles	San Luis Obispo	250	20	72.6	.....	103	13	49	10	49	0.69	.....	0.50	0	3	21	8	.....	John Landis.	
Peachland	Sonoma	490	21	55.2	+ 1.7	68	31	48	18	15	0.16	+ 0.09	0.13	0	4	10	7	.....	A. E. May.	
Petaluma	do	464	24	72.6	.....	101	7	46	30	40	0.01	.....	0.01	0	1	10	3	.....	John Hyslop.	
Placerville	El Dorado	3,400	18	65.0	- 0.3	96	10	33	15	50	0.57	+ 0.27	0.30	0	3	21	6	.....	U. S. Weather Bureau.	
Point Lobos	San Francisco	307	36	50.8	- 1.3	105	12	61	25	35	T.	+ 0.49	0.30	0	0	20	7	.....	J. E. Adamson.	
Point Reyes	Marin	552	38	80.6	- 1.7	102	10													

TABLE 1.—Climatological data for July, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevalling wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snow/fall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>California—Contd.</i>																				
Santa Rosa	Sonoma	181	24	67.6	+ 1.3	112	11	43	8†	51	0.07	+ 0.02	0.05	0	2	17	5	9	s.	Southern Pacific Co.
Selma **	Fresno	311	27	79.1	- 5.5	107	12	60	3†	...	0.19	+ 0.19	0.19	0	1	29	0	0	...	Do.
Seven Oaks	San Bernardino	5,006	3	61.2	.....	88	10	36	29	32	1.56	.....	0.75	0	12	10	10	10	w.	M. Lewis.
Sierra Madre	Los Angeles	1,400	16	72.6	+ 0.1	96	7	54	30	32	0.03	+ 0.02	0.03	0	1	18	1	1	...	Mrs. A. E. Gregory.
Sierraville	Sierra	5,000	3	59.3	.....	88	5	29	15	58	3.91	.....	1.75	0	7	10	3	3	sw.	C. D. Johnson.
Sisson	Siakiyou	3,555	24	64.0	- 5.9	89	31	37	12	45	0.55	+ 0.45	0.55	0	1	24	1	6	n.	Southern Pacific Co.
Soledad **	Monterey	399	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Sonora	Tuolumne	1,825	2	75.2	.....	100	11†	54	15†	40	0.08	+ 0.06	0.08	0	1	28	4	1	w.	Chas. P. Jones.
S. E. Farallon	San Francisco	30	10	55.3	+ 1.6	67	25	48	18	10	0.06	+ 0.06	0.05	0	2	9	10	12	nw.	U. S. Weather Bureau.
Springville	Tulare	4,000	6	69.0	.....	98	11	43	9	47	1.25	.....	0.37	0	4	19	6	6	.....	D. L. Wishon.
Squirrel Inn	San Bernardino	5,280	3	64.4	.....	88	10	42	28	26	0.49	.....	0.31	0	2	28	28	28	s.	A. D. Frantz.
Stanwood	Butte	2,140	9	70.0	.....	102	12	42	22†	42	0.22	.....	0.09	0	7	16	7	8	n.	Cal. Gas & Elect.
Stirling City	..... do	3,525	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Butte Co. R. R. Co.
Stockton (S. H.)	San Joaquin	23	42	75.1	+ 2.5	108	11	53	15	36	0.14	+ 0.14	0.14	0	1	24	6	1	nw.	State Hospital.
Storey	Madera	296	13	77.9	- 0.8	107	12	54	15	43	0.30	+ 0.30	0.30	0	1	28	0	3	.....	Santa Fe Co.
Suisun **	Solano	20	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Sulphur Banks	Lake	1,350	1	75.0	.....	106	11	50	2	46	0.04	.....	0.04	0	1	18	12	1	w.	L. S. Lorenzen.
Summit	Placer	7,017	40	57.2	- 3.8	79	10	38	1†	36	2.45	+ 2.29	1.00	0	5	15	2	14	s.	Southern Pacific Co.
Susanville	Lassen	4,175	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Tamarack	Alpine	8,000	7	52.4	.....	78	17†	30	3	47	4.22	+ 3.59	0.65	0	15	13	14	4	sw.	C. M. Penry.
Tehachapi **	Kern	3,964	26	75.5	- 0.9	96	6†	64	4†	.....	2.00	+ 1.99	2.00	0	1	.....	.....	.....	.....	Cal. Gas & Elect.
Tehama	Tehama	220	42	86.5	+ 2.4	101	12	64	16	.....	0.00	.....	0.00	0	0	26	0	5	s.	Southern Pacific Co.
Tejon Rancho	Kern	1,500	10	80.6	- 0.2	101	13	60	25†	28	1.00	+ 1.00	1.00	0	1	.....	.....	.....	.....	Do.
Three Rivers	Tulare	870	3	77.7	.....	106	5†	54*	15	44	0.87	.....	0.55	0	4	19	7	5	sw.	S. E. Bailey.
Towle	Placer	3,704	27	75.8	+ 5.1	102	12	55	15	34	0.06	+ 0.04	0.04	0	3	27	3	1	ne.	Southern Pacific Co.
Tracy **	San Joaquin	64	33	84.8	+ 4.9	107	11	64	28	.....	0.18	+ 0.18	0.18	0	1	.....	.....	.....	.....	Do.
Ukiah	Mendocino	620	20	73.2	+ 1.9	110	11	44	8	55	0.18	+ 0.16	0.13	0	2	22	5	4	nw.	Dr. Geo. McCowen.
Upper Lake	Lake	1,350	28	72.4	- 1.5	107	11	44	13	52	0.17	+ 0.15	0.17	0	1	26	2	3	nw.	C. M. Hammond.
Vacaville	Solano	175	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. O. Coburn.
Valley Springs **	Calaveras	673	24	80.0	0.0	108	11	66	15†	.....	0.00	- 0.01	0.00	0	0	24	6	1	nw.	Southern Pacific Co.
Visalia	Tulare	334	25	76.2	- 3.8	109	12	48	30	56	0.00	- 0.02	0.00	0	0	26	0	5	.....	Santa Fe Co.
Warner Springs	San Diego	3,165	5	71.3	.....	98	5	45	28	39	0.44	.....	0.35	0	2	24	7	0	.....	Mrs. F. S. Sandford.
Wasco	Kern	336	13	82.2	- 0.1	109	5	58	14	44	0.00	.....	0.00	0	0	11	0	20	nw.	Santa Fe Co.
Watsonville	Santa Cruz	23	17	63.4	+ 1.0	105	11	40	14†	58	0.38	+ 0.38	0.30	0	3	9	20	2	w.	Spreckels Sugar Co.
Weaverville	Trinity	2,162	1	69.6	.....	100	22	41	2†	49	0.69	+ 0.66	0.52	0	3	24	1	6	.....	U. S. Forest Service.
Westhope	Humboldt	1,700	3	66.4	.....	95	18	43	2†	39	1.51	.....	1.07	0	3	22	5	4	s.	M. E. Lathrop.
Westley **	Stanislaus	90	24	81.7	- 1.0	106	11	60	20†	.....	0.15	+ 0.13	0.15	0	1	23	6	2	n.	Southern Pacific Co.
Wheatland	Yuba	84	26	77.8	+ 1.1	107	11	54	15	39	0.08	+ 0.07	0.08	0	1	19	8	4	s.	Wm. Lumbard.
Willows	Glenn	136	34	81.0	- 1.9	108	11†	44	3	49	T.	0.00	T.	0	0	27	2	2	n.	E. C. Mills.
Yorba Linda	Orange	.....	.....	73.0	.....	99	7	53	28	39	T.	.....	T.	0	0	26	4	1	w.	S. J. Walker.
Yosemite	Mariposa	3,945	9	67.4	.....	101	11†	33	1	59	1.36	.....	0.57	0	6	23	3	5	s.	J. P. Kelly.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.  
 \*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.  
 † Also on other dates.  
 T. Precipitation is less than 0.01 inch rain or melted snow.







TABLE 2.—Daily precipitation for July, 1913. District No. 11, California—Continued.

Stations.	Watershed.	Day of month.																														Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
<i>California—Contd.</i>																																	
Upper Mattole.....	Coast.....																																
Vacaville.....	Sacramento.																																
Valley Springs.....	San Joaquin.																																
Visalia.....	do.....																																
Warner Springs.....	Coast.....																																
Wasco.....	San Joaquin.																																
Watsonville.....	Coast.....																																
Weaverville.....	do.....		T.	.04																													
Weitchpec.....	Klamath.			1.07																													
West Branch.....	Sacramento.																																
Westley.....	San Joaquin.																																
West Point.....	do.....																																
West Saticoy.....	Coast.....																																
Wheatland.....	Sacramento.																																
Willows.....	do.....																																
Yorba Linda.....	Coast.....																																
Yosemite.....	San Joaquin.																																

\* Precipitation included in that of the next measurement.  
 † Separate dates of falls not recorded.  
 ‡ Precipitation for the 24 hours ending on the morning when it is measured.  
 T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for July, 1913. District No. 11, California.

Date.	Lake View, Oreg.		California.																									
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
			Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	70	45	77	42	101	68	72	40	107	67	88	59	61	54	97	63	96	59	87	61	75	58	86	46	102	61	91	65
2....	68	37	77	40	102	71	70	39	103	67	88	60	61	53	94	61	96	64	82	60	70	53	84	44	97	58	88	62
3....	59	47	72	51	100	78	64	39	103	72	89	61	64	55	92	63	92	67	77	60	64	52	77	49	96	59	86	66
4....	.....	41	84	43	100	72	70	40	103	67	93	59	62	55	94	60	92	59	79	61	78	56	88	45	99	61	97	64
5....	83	45	94	42	105	73	88	45	103	70	99	61	60	55	103	70	98	60	83	62	90	71	94	47	109	64	102	67
6....	83	52	90	48	108	79	88	49	108	77	101	68	66	55	106	76	97	70	84	66	81	72	95	47	110	70	103	69
7....	84	51	92	47	105	85	85	50	105	80	100	64	62	54	106	73	98	66	89	64	83	68	99	53	109	71	102	70
8....	86	47	93	45	105	81	88	48	109	76	99	61	62	52	104	72	98	72	87	68	78	68	95	53	108	70	102	69
9....	77	47	88	43	108	84	75	47	112	75	97	61	69	52	103	68	98	68	84	64	78	62	93	49	105	67	97	68
10....	79	41	85	46	108	82	94	50	111	75	102	78	62	54	104	67	103	70	89	65	85	62	94	48	103	65	99	72
11....	79	40	90	43	110	74	98	53	113	77	104	80	62	51	108	71	102	72	86	63	96	76	102	53	113	70	102	80
12....	79	43	88	42	109	74	90	46	109	77	103	66	59	52	109	75	100	64	78	62	89	66	92	56	114	73	105	74
13....	66	32	81	41	104	73	80	43	101	74	90	60	59	50	95	66	98	71	77	64	77	55	86	52	109	69	89	69
14....	72	37	79	34	101	74	85	44	101	73	89	58	61	49	94	64	94	60	76	64	71	55	83	43	106	63	89	62
15....	73	36	82	38	101	70	88	47	102	71	89	53	60	52	93	58	90	56	77	63	75	55	85	40	97	59	83	63
16....	78	41	86	38	102	68	90	50	103	71	91	56	59	53	98	82	95	54	77	61	78	65	88	42	101	58	94	62
17....	83	40	93	41	98	65	90	50	103	73	96	58	58	52	102	64	92	60	78	61	83	70	92	44	102	59	100	65
18....	86	52	92	48	95	67	87	55	100	73	95	63	58	50	93	68	83	62	79	63	81	70	77	49	102	65	96	68
19....	86	54	82	60	90	70	87	56	97	74	94	65	58	49	102	87	81	65	78	61	79	62	92	56	105	66	102	80
20....	85	57	89	53	86	68	87	57	98	74	92	62	58	53	95	66	80	64	79	64	74	56	90	61	105	74	99	75
21....	84	59	89	58	85	65	84	53	99	70	91	62	61	58	91	68	80	60	82	63	67	54	87	57	106	66	94	71
22....	83	53	85	55	92	67	73	52	98	74	88	68	65	54	86	69	77	59	78	60	66	55	84	55	96	70	93	74
23....	73	57	70	59	93	68	68	50	99	79	84	67	62	57	95	67	82	60	78	61	74	59	74	55	100	68	77	69
24....	64	52	71	56	92	66	64	50	99	66	90	63	60	56	91	64	80	55	74	60	67	51	86	48	98	66	89	63
25....	59	51	68	50	87	63	65	51	99	63	83	59	61	56	76	63	74	51	74	59	62	50	73	48	86	59	79	61
26....	73	52	76	53	86	64	72	52	90	70	84	59	60	56	85	61	82	52	73	60	65	49	79	51	88	64	86	68
27....	77	45	84	54	93	62	73	48	93	64	87	58	63	56	88	58	78	56	75	60	66	50	82	50	98	60	86	64
28....	75	49	81	55	93	64	75	49	97	66	87	57	59	55	89	60	78	58	72	61	67	49	83	49	92	61	91	61
29....	73	47	79	51	92	58	84	51	99	67	88	57	60	52	90	61	83	58	75	61	68	49	85	50	95	66	91	64
30....	78	42	86	48	96	58	85	52	98	65	91	59	60	52	96	63	86	53	73	58	74	63	91	49	101	63	98	66
31....	85	47	94	54	97	65	75	53	96	68	83	57	64	53	98	64	90	54	77	59	70	61	92	49	102	65	95	68
Mns..	76.7	46.4	83.8	47.8	98.2	70.1	80.5	48.7	101.9	71.5	92.1	61.9	61.2	53.2	96.0	65.8	89.5	61.3	79.2	61.8	75.2	59.1	87.2	49.6	101.7	65.0	94.0	67.7

Date.	California.																										
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1....	94	59	85	57	75	60	66	52	75	48	80	55	80	57	89	49	70	43	88	58	66	38	.....	.....	90	33	
2....	93	58	87	56	71	61	69	52	76	46	73	49	75	55	88	47	71	42	86	57	68	38	.....	.....	89	40	
3....	88	54	80	60	69	61	66	55	77	52	84	52	70	55	81	54	78	43	90	58	63	44	.....	.....	85	41	
4....	90	55	93	58	71	62	69	53	84	55	85	52	74	62	87	49	79	44	94	57	68	38	.....	.....	97	40	
5....	100	58	100	63	75	61	84	54	95	50	87	53	78	60	97	50	80	44	100	63	77	48	.....	.....	100	41	
6....	100	63	97	67	74	65	66	52	85	55	88	54	80	61	96	49	84	46	101	68	76	52	.....	.....	98	41	
7....	102	63	98	65	78	65	69	54	89	56	85	56	85	60	92	49	84	43	96	68	75	43	.....	.....	100	41	
8....	95	61	96	62	75	66	61	52	84	51	90	54	80	63	85	43	83	43	95	64	75	50	.....	.....	96	50	
9....	97	61	95	62	75	66	70	53	84	50	96	52	81	58	96	48	78	51	97	60	75	45	.....	.....	100	48	
10....	102	63	100	66	76	63	75	53	90	55	90	61	80	59	103	62	78	53	103	68	79	43	.....	.....	100	48	
11....	97	65	104	76	74	64	90	62	103	59	91	62	75	59	112	61	81	57	108	74	78	48	.....	.....	101	47	
12....	91	59	98	65	74	65	66	54	90	61	80	54	68	65	88	55	82	37	96	70	76	50	.....	.....	100	48	
13....	84	58	91	57	71	66	66	52	82	56	75	57	75	63	85	43	71	42	93	63	75	52	.....	.....	100	48	
14....	82	61	84	55	74	66	63	50	78	51	72	55	73	64	86	43	75	42	84	58	67	46	.....	.....	101	48	
15....	91	58	97	54	73	66	65	51	81	49	70	49	72	56	85	45	75	53	89	53	67	39	.....	.....	95	38	
16....	91	59	92	58	72	65	65	51	82	48	70	51	72	59	83	45	84	49	91	56	69	40	.....	.....	93	37	
17....	80	55	80	56	71	63	62	51	87	50	76	52	70	61	90	47	87	56	97	59	78	40	.....	.....	94	38	
18....	90	61	97	59	72	62	60	51	79	52	73	53	68	59	78	48	87	57	90	60	70	50	.....	.....	96	40	
19....	87	60	88	58	72	62	61	52	79	53	74	49	72	60	74	51	86	56	89	60	70	52	.....	.....	95	47	
20....	75	63	86	57	74	66	63	52	79	53	73	54	70	62	73	51	85	54	86	59	70	50	.....	.....	94	46	
21....	89	63	86	60	74	65	67	56	81	57	77	57	78	60	80	52	81	57	86	60	66	51	.....	.....	95	48	
22....	91	59	75	66	73	66	66	56	78	60	78	57	76	62	73	58	77	50	82	64	75	50	.....	.....	80	50	
23....	87	55	84	65	73	65	70	57	83	60	74	54	78	64	83	56	62	52	89	63	68	48	.....	.....	73	53	
24....	82	54	81	59	73	63	64	56	76	59																	